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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Ravi Murthy

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EXAMINER

LEWIS, CHERYL RENE A

ART UNIT

PAPER NUMBER

2167

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/763,355	Applicant(s) MURTHY ET AL.	
	Examiner Cheryl Lewis	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/8/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-50 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-50 are rejected under 35 U.S.C. 102(e) as being anticipated by Lal (Pat. No. 6,832,219 B2 filed March 18, 2002).
4. Regarding Claim 1, 13, 37, 45, and 46, Lal teaches a method and system for storing and querying of markup based documents in a relational database. The method and associated system for storing and querying of markup based documents in a relational database as taught or suggested by Lal includes:

assigning a document identifier to an XML document (col. 4, lines 10-24); parsing the XML document to identify a node (col. 4, lines 52-64, col. 5, lines 38-60); the identified node in the XML document (col. 5, lines 38-67, col. 6, lines 1-40); storing path information for the node (col. 3, lines 62-67, col. 4, lines 1-25, col. 5, lines 38-67, col. 6, lines 1-40); storing hierarchical information for the node (col. 4, lines 10-25); and storing

Art Unit: 2167

node data for the node (col. 3, lines 62-67, col. 4, lines 1-25, col. 5, lines 38-67, col. 6, lines 1-40).

5. Regarding Claims 2 and 14, Lal teaches the hierarchical information comprises a hierarchical level within the XML document (col. 4, lines 10-25).

6. Regarding Claims 3 and 15, Lal teaches the node data comprises a node type (col. 4, lines 52-64).

7. Regarding Claim 4, 16, Lal teaches the document identifier is a unique identifier for each different XML document (col. 4, lines 52-64, col. 5, lines 1-60).

8. Regarding Claims 5 and 17, Lal teaches the path information comprises a full path for the node (col. 6, lines 11-40).

9. Regarding Claims 6 and 18, Lal teaches the path information comprises a path identifier (col. 5, lines 37-60).

10. Regarding Claims 7 and 20, Lal teaches the path identifier corresponds to a key to a path entry containing a full path for the node (col. 5, lines 37-60).

11. Regarding Claims 8 and 19, Lal teaches the path entry resides in a first table structure and the path information (col. 5, lines 36-67, col. 6, lines 1-40), hierarchical information, and node data reside in a second table structure (col. 5, lines 36-67, col. 6, lines 1-40).

12. Regarding Claims 9 and 21, Lal teaches the path entry comprises node name corresponding to a name of a terminal node (col. 5, lines 36-67, col. 6, lines 1-40).

13. Regarding Claim 10, Lal teaches maintaining one or more indexes (col. 5, lines 36-67, col. 6, lines 1-40).

Art Unit: 2167

14. Regarding Claim 11, Lal teaches one more indexes comprises an index on a path identifier (col. 5, lines 36-67, col. 6, lines 1-40), an index on the document identifier and a start position (col. 5, lines 36-67, col. 6, lines 1-40), or an index on the document identifier (col. 5, lines 36-67, col. 6, lines 1-40).

15. Regarding Claim 12, Lal teaches the path identifier corresponds to a key to a path entry containing a full path for the node (col. 5, lines 36-67, col. 6, lines 1-40), the path entry resides in a separate table (col. 5, lines 36-67, col. 6, lines 1-40), and one or more indexes comprise an index on path identifiers (col. 5, lines 36-67, col. 6, lines 1-40).

16. Regarding Claims 22, 47, and 48, Lal teaches generating a SQL query against the computer-implemented structure (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38); and producing a result set based upon executing the SQL query (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

17. Regarding Claim 23, Lal teaches the SQL query reconstructs the XML document (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

18. Regarding Claims 24 and 26, Lal teaches The SQL query provides the same result (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

Art Unit: 2167

19. Regarding Claim 25, Lal teaches the SQL query identifier a fragment within the XML document (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

20. Regarding Claim 27, Lal teaches the SQL query corresponds to an XPath expression (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

21. Regarding Claim 28, Lal teaches the XPath expression is translated to the SQL query by breaking the XPath expression into multiple components (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38); creating a new SQL query corresponding to each of the multiple components (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38); and joining the new SQL query corresponding a component to its previous component (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

22. Regarding Claim 29, Lal teaches the XPath expression is broken into multiple components by considering each continuous segment of simple XPath, wherein each occurrence of a predicate within the XPath causes creation of a new component (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

23. Regarding Claim 30, Lal teaches a set of node names separated by "/" corresponds to a single XPath component (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

Art Unit: 2167

24. Regarding Claim 31, Lal teaches the new SQL query comprises a join of a path_index_table and a path_table (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

25. Regarding Claim 32, Lal teaches the new SQL query comprises one or more conditions (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

26. Regarding Claim 33, Lal teaches one or more conditions comprises a condition for the node type (col. 3, lines 62-67, col. 4, lines 1-25, col. 5, lines 38-67, col. 6, lines 1-40).

27. Regarding Claim 34, Lal teaches joining the new SQL query corresponding the component to its previous component uses a join condition comprising a join on a document identifier (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

28. Regarding Claims 35, 36, 49, and 50, Lal teaches storing the unstructured document in a storage structure in the relational database system (col. 3, lines 40-67, col. 4, lines 1-36), the storage structure corresponding to a universal schema (col. 3, lines 40-67, col. 4, lines 1-36); determining whether to create an index upon the storage structure (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38), wherein one or more indexes are maintained if desired (col. 3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38); and accessing the unstructured documents by accessing the storage structure (col.

Art Unit: 2167

3, lines 40-61, col. 4, lines 10-36, col. 7, lines 57-67, col. 8, lines 1-48, col. 11, lines 23-38).

29. Regarding Claims 38-44, the limitations of these claims have been noted in the rejection of claims 1-37 presented above. They are therefore rejected as set forth above.

NAME OF CONTACT

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Lewis whose telephone number is (571) 272-4113. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

(571) 273-4113 (Use this FAX #, only after approval by Examiner, for "INFORMAL" or "DRAFT" communication. Examiners may request that a formal paper/amendment be faxed directly to them on occasions.).

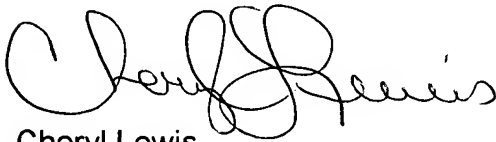
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/ Technology Center (571) 272-2100.

Art Unit: 2167

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Cheryl Lewis". The signature is stylized with large, flowing loops.

Cheryl Lewis
Patent Examiner
June 26, 2006